

Western Massachusetts Electric Company

2007 Manhole Event Tracking

Report ID	Manhole Report Type	Number of Customers Interrupted	Customer Outage Hours	Cause	Failure Date	Failure Time	Weather	Town	Street	Feeder	Voltage Class	Manhole Number	Date of Most Recent Manhole Inspection	Manhole Cover Type	Cover Dislodged? (Y/N)*	Failed Equipment Type	Estimated Age of Failed Equipment	Cable Type (if applicable)	Gas Detected (Y/N)	Injury (Y/N)	Associated Accident ID	Comments
1	Explosion	533	799.5	Insulation Failure	3/31/2007	12:36	NORM	Pittsfield	Fenn St.	5C4	5 kV	271/10	N/A	Solid	Y	Splice	> 30 years	N/A	N	N		On 3/31/07 at approximately 12:36 PM WMECO received a report of a smoking manhole on Fenn Street in Pittsfield. Crews responded and found light smoke in manhole 271/10 on Fenn Street. Smoke was the result of a primary cable splice failure on the 5C4 circuit within the manhole. The crew also found the manhole cover dislodged and located approximately two feet to the side of the opening. The failed splice was old hand wrapped splice and caused some damage to one of the splices on an adjacent phase. The failed splice, damaged splice, and the third unaffected splice were all replaced with new Pirelli cold shrink splices. It is believed that a build up of gases from the failing splice filled the manhole and was ignited upon the failure of the splice causing the cover to be dislodged. Manhole cover was solid with one hole.
2	Explosion	1	1.25	Insulation Failure	5/29/2007	16:02	NORM	Springfield	Walnut St.	21S11	15 kV	1595/15	3/3/2006	Solid	Y	Splice	> 30 years	N/A	N	N		On 5/29/07 at approximately 4:02 PM WMECO received an outage call related to the 21S11 circuit. Crews responded and found the cover ajar on manhole 1595/15 on Walnut Street in Springfield along with some light residual light smoke in the manhole. The cause of the cover being ajar and the residual smoke was a primary cable splice failure on the 21S11 circuit within the manhole. The failed splice was an old lead branch which was removed and replaced with a Raychem heat shrink splice. Manhole cover was solid with 5 holes. The fault was cleared by the station breaker which functioned properly.
3	Explosion	31	49.6	Insulation Failure	6/26/2007	18:24	NORM	Springfield	Page Blvd.	5J10	15 kV	1195/56	N/A	Solid	Y	Primary Cable	> 30 years	PILC	N	N		On 6/26/07 at approximately 6:24 PM WMECO received outage calls on the 5J10 circuit. Crews responded and found the cover off of manhole 1195/56 on Page Boulevard in Springfield. The cause of the cover lifting off its frame was a primary cable fault within the manhole on the 5J10 circuit. The failed section of cable was removed and the cable was pieced out within the manhole and respliced. Manhole cover was solid with 5 holes. The fault was cleared by the station breaker which functioned properly. There were no personal injuries as a result of this event. However, a motor vehicle did receive minor damage when it drove into the open manhole prior to WMECO arriving on site and securing the area.
4	Explosion	2032	2624	Insulation Failure	6/29/2007	11:32	NORM	Springfield	State St.	5J14	15 kV	1475/91	1/23/2007	Solid	Y	Primary Cable	> 30 years	PILC	N	N		On 6/29/07 at approximately 11:32 AM WMECO received outage calles related to the 5J14 circuit, 5J17 circuit and Jasper Substation. Crews responded and found the cover ajar on MH 1475/91 on State Street in Springfield. The cause of the event was a primary cable fault within the manhole on the 5J14. New cable was installed and spliced to the existing with Raychem heatshrink splices. The fault was cleared by the 5J14 breaker which functioned properly. The related outages on the 5J17 and Jasper substation were caused by the misoperation of a newly installed customer owned switch location. A breaker failed to open on reverse current which allowed the 5J17 to backfeed the fault causing the 5J17 breaker to open. Jasper substation was being supplied by the 5J17. The 5J17 station breaker and Jasper substation functioned properly. The customer identified the problem in their switchgear and corrected it.
5	Explosion	0	0	Insulation Failure	8/22/2007	4:58	NORM	Springfield	Saratoga St	Network	120/208	1399/4	N/A	Solid	Y	Secondary Cable	>30 years	Braided Cable	N	N		On 8/22/07 at approximately 4:58 AM we received a customer call stating they saw a fire coming from a manhole and someone also reported an explosion and cover blown off. A crew supervisor responded and found the cover ajar on manhole 1399/4 at Saratoga and Bayonne Sts. He did not see any smoke or fire. There was no personal injury or property damage as a result of this event. The event was caused by a fault on an older braided cable in our network area. There were no customer outages and the old cable was removed and replaced.

*A "YES" response indicates that the manhole cover was either "AJAR" or "OFF CASTING"

Data from 1/1/07 through 12/31/07

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2007 ELEVATED VOLTAGE REPORT

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